

REMARKS

Claims 1-15 and 17-22 are pending. Claims 1-6, 17-19 and 21-22 are allowed. By this Amendment, Claim 16 is canceled without prejudice or disclaimer; and Claim 14 amended to incorporate the allowable subject matter of Claim 16. As such, Applicants respectfully submit that no new matter is submitted herein.

Claims 1-6, 14-15, 17-19 and 21-22 Allowed/Allowable

Applicants appreciate and acknowledge the indication by the Examiner that Claims 1-6, 17-19 and 21-22 are allowed.

Applicants also appreciate and acknowledge the indication by the Examiner that Claim 16, although objected to for being dependent on a rejected base claim, i.e., Claim 14, would be allowable if rewritten in independent form, including all of the features of the base claim and any intervening claims. In this regard, Applicants respectfully note the allowable subject matter of Claim 16, which is canceled herein without prejudice or disclaimer, has been incorporated into Claim 14, thereby placing Claims 14-15 in condition for allowance.

Claims 7-13 and 20 Also Recite Patentable Subject Matter

Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Number 6,787,954 to Yoshitsugu et al. ("Yoshitsugu") in view of U.S. Patent Number 5,822,846 to Moritan et al. ("Moritan"). Claims 8-13 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yoshitsugu and Moritan as applied in Claim 7 above, and further in view of U.S. Patent Number 5,914,832 to Teshima. Applicants respectfully traverse both rejections.

Claim 7 recites a dynamic bearing device comprising a housing, a bearing sleeve secured to an inner periphery of the housing, an axial member with an axial portion and a flange portion, a thrust member secured to an inner peripheral portion at one end of the housing, a radial bearing portion, which is provided between the bearing sleeve and the axial portion, and supports the axial portion in a non-contact manner in a radial direction by a dynamic pressure action of a lubricating oil that is generated in a radial bearing gap, and a thrust bearing portion, which is provided between the bearing sleeve and the thrust member, and the flange portion, and supports the flange portion in a non-contact manner in a thrust direction by a dynamic pressure action of the lubricating oil that is generated in a thrust bearing gap, ***wherein the thrust member is press fitted and secured to the inner peripheral portion at the one end of the housing with an adhesive disposed therebetween.***

Claim 13 recites a method of producing a dynamic bearing comprising a housing, a bearing sleeve secured to an inner periphery of the housing, an axial member with an axial portion and a flange portion, a thrust member secured to an inner peripheral portion at one end of the housing, a radial bearing portion, which is provided between the bearing sleeve and the axial portion, and supports the axial portion in a non-contact manner in a radial direction by a dynamic pressure action of a lubricating oil that is generated in a radial bearing gap, and a thrust bearing portion, which is provided between the bearing sleeve and the thrust member, and the flange portion, and supports the flange portion in a non-contact manner in a thrust direction by a dynamic pressure action of the lubricating oil that is generated in a thrust bearing gap, the method comprising the steps of ***applying an adhesive to the inner peripheral portion***

at the one end of the housing, and press fitting the thrust member into the inner peripheral portion at the one end of the housing to which the adhesive has been applied.

Claim 20 recites a motor comprising a rotor, a dynamic bearing device for supporting rotation of the rotor, a retaining member for retaining the dynamic bearing device, and a stator and a rotor magnet, which are provided between the rotor and the retaining member, and oppose each other across a predetermined gap provided therebetween, wherein the dynamic bearing device comprises a housing that is retained by the retaining member, a bearing sleeve secured to an inner periphery of the housing, an axial member with an axial portion and a flange portion, which rotates together with the rotor, a thrust member secured to an inner peripheral portion at one end of the housing, a radial bearing portion, which is provided between the bearing sleeve and the axial portion, and supports the axial portion in a non-contact manner in a radial direction by a dynamic pressure action of a lubricating oil that is generated in a radial bearing gap, and a thrust bearing portion, which is provided between the bearing sleeve and the thrust member, and the flange portion, and supports the flange portion in a non-contact manner in a thrust direction by a dynamic pressure action of the lubricating oil that is generated in a thrust bearing gap, ***wherein the thrust member is press fitted and secured to the inner peripheral portion at the one end of the housing with an adhesive disposed therebetween***, and an internal taper shaped space is provided between an outer peripheral portion of the thrust member and the inner peripheral portion at the one end of the housing, for retaining the adhesive, adjacent to a press fitting portion of the thrust member inside the housing.

As explained in paragraph [0023] of the originally filed application, the bold and italicized features of Claims 7, 13 and 20 provide the following advantages:

According to this configuration, even if abrasion particles are generated during press fitting of the thrust member, the abrasion particles are trapped by the adhesive to be sealed in the adhesive when the adhesive hardens. As a result, any penetration of the abrasion particles accompanying the press fitting of the thrust member can be prevented. Furthermore, during the press fitting of the thrust member, the adhesive also functions as a lubricant, which means that not only is the generation of the abrasion particle during press fitting suppressed, but the press fitting operation also becomes easier.

Applicants respectfully submit Yoshitsugu, Moritan, and Teshima, alone or in combination, fail to teach or suggest each and every feature of Claims 7, 13 and 20.

In particular, Applicants respectfully note Yoshitsugu states that "Tip section 21 extends from arm section 19 of sleeve 5, and is bent toward another face 22, i.e., a rear face, of thrust plate 12 and then caulked. A caulked section is fixed by applying adhesive, thereby increasing mechanical strength such as shock resistance." See column 4, lines 47-51 and Figure 2. That is, Yoshitsugu teaches that the thrust plate 12 is secured to the inner peripheral portion of the tip section 21 by caulking the end portion of the tip section 21 toward the rear face of the thrust plate 12 and that the caulked section is fixed by applying adhesive for increasing mechanical strength. Therefore, in Yoshitsugu, the adhesive is disposed only on the caulked section and the rear face 22 of the thrust plate 22, so that, the adhesive is not disposed between the inner peripheral portion of the tip section 21 and the thrust plate 12. It is apparent that such the adhesive of Yoshitsugu cannot have the advantages as described in the above-cited paragraph [0023] of the instant application.

Applicants further submit, respectfully, that the Office Action misstates the teachings of Moritan. Applicants note that Moritan, in column 8, lines 15-18, states "Subsequently, the thrust plate 22 is fixed at the bottom face of the housing 23a by means of caulking. Instead of the caulking, press-fit can be applied." Moritan does not teach or suggest using an adhesive. In addition, Applicants note that if the press-fit of Moritan were applied to Yoshitsugu instead of caulking, the adhesive of Yoshitsugu would no longer be necessary since the adhesive would be applied for increasing the mechanical strength of the caulked section. Furthermore, even if the adhesive might be applied, such the combination of press-fit and adhesive would structurally be different from the feature recited by Claim 7 because the adhesive of Yoshitsugu is not disposed between the inner peripheral portion of the tip section 21 and the thrust plate 12.

Teshima teaches the thrust plate 5 is fixed by caulking to a lower end portion of the sleeve section 3. See column 5, lines 34-35 and column 6, lines 36-47. Teshima does not teach or suggest applying an adhesive or press-fitting.

To establish *prima facie* obviousness, each feature of a rejected claim must be taught or suggested by the applied art. As explained above, Yoshitsugu, Moritan, and Teshima, alone or in combination, fail to teach or suggest each and every feature recited by Claims 7, 13 and 20. Therefore, Applicants respectfully submit Claims 7, 13 and 20 are not rendered obvious by the teachings of Yoshitsugu, Moritan, and Teshima, alone or in any combination thereof. As such, Applicants respectfully submit Claims 7, 13 and 20 should be deemed allowable.

Claims 8-12 depend from Claim 7. It is respectfully submitted that these dependent claims be deemed allowable for at least the same reasons Claim 7 is allowable, as well as for the additional subject matter recited therein.

Applicants respectfully request withdrawal of the rejections.

Claims 14-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Number 6,657,340 to Obara in view of U.S. Patent Number 6,512,654 to Teshima ("Teshima '654"). Applicants respectfully traverse the rejection, however, in view of the amendment to Claim 14, which is discussed above, Applicants respectfully submit Claims 14-15 are in condition for allowance and the rejection is rendered moot.

Applicants respectfully request withdrawal of the rejection.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding objection and rejections, allowance of Claims 1-15 and 17-22, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 100725-00109.**

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Murat Ozgu', is written over the printed name.

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